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IS THE HUMAN RACE DETERIORATING ?

BY M. G. MULHALL, F. S. S.

AN impression seems to be gaining ground that the nations of Christendom are undergoing serious changes as regards vital statistics, that their rates of increase are declining, and that in the middle of the next century some nations will come to a stand-still, birth-rate and death-rate becoming equal. First, as regards birth-rate there are seven principal countries of Europe that possess complete and accurate statistics for fifty-two years, which show as follows:

	Births yearly per 1,000 population.		
	1841-60	1861-80	1883-92
England.....	33.4	35.1	31.9
France.....	26.7	25.8	23.3
Prussia.....	38.0	39.1	37.4
Austria.....	40.3	39.0	37.7
Holland.....	34.9	36.3	33.7
Belgium.....	30.2	32.0	29.9
Scandinavia*.....	32.3	31.3	29.9
Mean rate.....	33.8	34.1	32.0

In every one of the above nations the birth-rate for ten years ending 1892 shows a marked decline, and therefore the main fact relied upon by alarmists is indisputable. The inference, however, which they draw from this fact is erroneous and absurd. Had they taken the trouble to compare birth and death rates they would have found that the natural increase, that is the surplus of births over deaths, has been much greater (in Europe) during the last ten years than at any previous period of which we have statistical returns. The explanation, of course, is that death-rates have declined more than birth-rates. Paradoxical as it may seem, a falling birth-rate often indicates a rising increase of population, as will be seen on comparing the rates of the decade 1883-92 with those of any previous term of years. For ex-

* The statistics of Sweden, Norway and Denmark are taken collectively, as if they were provinces of one nation.

ample let us compare the figures for the said decade with those for a term of twenty years ending 1880, viz:

	1861-80.			1883-92.		
	Births.	Deaths.	Increase.	Births.	Deaths.	Increase.
England.....	35.1	22.0	13.1	31.9	19.2	12.7
France.....	25.8	24.0	1.8	23.3	22.2	1.1
Prussia.....	39.1	27.1	12.0	37.4	24.4	13.0
Scandinavia.....	31.3	19.0	12.3	29.9	17.3	12.6
Austria.....	39.0	30.8	8.2	37.7	29.0	8.7
Hungary.....	42.6	39.4	3.2	43.6	32.5	11.1
Italy.....	37.2	29.9	7.3	37.8	27.2	10.6
Holland.....	36.3	24.6	11.7	33.7	20.9	12.8
Belgium.....	32.0	22.7	9.3	29.9	20.9	9.0
Average.....	35.4	26.6	8.8	33.9	23.7	10.2

The mean annual rate of increase for the above nine nations rose from 8.8 in the period 1861-80 to 10.2 in the decade 1883-92, that is to say from 8,800 to 10,200 per million of population. In other words, the natural increase of Europe proceeds now at 16 per cent. greater speed than in the period 1861-80. This evident fact disposes of all the assertions and theories connected with the supposed deterioration of the human race. Nevertheless, it may be interesting to pursue the subject further by comparing the number of legitimate births in each country with that of marriages :

LEGITIMATE BIRTHS PER 100 MARRIAGES.

1861-80.		1888-92.		1861-80.		1888-92.	
England.....	385	389		Italy.....	411	451	
France.....	282	284		Holland.....	407	457	
Germany.....	401	420		Belgium.....	379	369	
Austria.....	362	414		Sweden.....	372	425	
Hungary.....	375	444		Denmark.....	320	401	

The mean rate in the first period was 369, and in the second 405, being an advance of 10 per cent., that is to say 10 families now have as many children as 11 had before 1880. The question naturally arises, why should marriages be more prolific now than before? Because the marriage-rate has declined, and there is an invariable law respecting the human race, that as the ratio of marriages to population rises the number of children to each marriage will fall, and *vice versa*, as will be seen hereafter. For the present let us compare the marriage-rates in the above two periods :

MARRIAGES YEARLY PER 10,000 POPULATION.

1861-80.		1888-92.		1861-80.		1888-92.	
England.....	83	76		Italy.....	75	76	
France.....	79	73		Holland.....	81	70	
Prussia.....	85	82		Belgium.....	73	74	
Austria.....	87	77		Sweden.....	69	59	
Hungary.....	93	87		Denmark.....	77	69	

The marriage-rate has fallen heavily in all countries except Belgium and Italy: the mean rate for the 10 countries was 80 in

the first period, and 74 in the second, being equivalent to a fall of $7\frac{1}{2}$ per cent., which is quite sufficient to explain the decline of birth-rate that has been already noticed. Is it reasonable to expect the birth-rate to remain unaltered while the marriage-rate shows so heavy a fall? As to the causes of this fall they are numerous and diversified, the principal being agricultural depression, military service and emigration · all these have operated in the same direction, and with special force since 1880. To illustrate the effects of agricultural depression and emigration we have only to take the case of Ireland, where the marriage-rate has fallen to 47 per 10,000 inhabitants, the rate for Europe being 74. Indeed, when we consider the fall in prices of all agricultural products throughout Europe, since 1880, we cannot be surprised that it has seriously affected the rural population and reduced the marriage-rate.

We have seen in the foregoing tables that, while the marriage-rate has declined since 1880, the average number of children to a marriage has increased. In like manner those countries with a low marriage-rate will have a much larger ratio of children to each marriage than those in which the marriage-rate is high, viz.:

	Marriage Rate per 10,000 Pop.	Legit. Births to 100 Marriages.
Ireland.....	47	476
Sweden.....	59	425
Holland.....	70	457
England.....	76	389
Austria.....	77	414

Before going further it may be well to set down here the facts elucidated from the preceding tables.

1. The birth-rates of seven principal European nations have declined notably since 1880.

2. The decline in death-rates has been still greater, and the surplus of births over deaths is not falling, but rising.

3. Some nations with a low birth-rate have a greater natural increase than others with the highest birth-rate.

4. Marriage-rates have declined since 1880, but the number of children to a marriage has increased in every country except Belgium.

5. The natural increase of population has proceeded with greater rapidity since 1880 than before.

There is, meantime, no reason to anticipate any inconvenience from this increased rapidity of growth. At the close of the

eighteenth century Malthus alarmed Europe by his theory that population increased too fast for the public welfare : this view was successfully impugned by Nassau Senior, who showed "that the means of subsistence have a tendency to increase faster than population," and the experience of the nineteenth century bears out Professor Senior's dogma. When Malthus wrote, the labor of a peasant sufficed to raise food for ten persons : at present in the United States a male adult can raise food for 120 persons. Nevertheless, the shade of Malthus seems to haunt many journalists and other writers of our time. They cannot see that under ordinary circumstances an increase of population means an increase of wealth and prosperity. Thinly populated countries, like Russia, Spain, and Ireland, are steeped in poverty, while populous ones, such as England, Belgium, and Germany, are in an affluent condition. The rate of wages is always highest where population is dense, lowest (as in Russia or Spain) where there are less than 100 persons to the square mile. If there is much misery in Europe it is not because of surplus population, but for divers causes that need not here be enumerated.

So much for the Old World : let us now come to the United States, where the rate of increase of population has been steadily declining, the successive decades showing as follows :

Period.	Increase per cent.	Period.	Increase per cent.
1831-40.....	32.7	1861-70.....	22.6
1841-50.....	35.9	1871-80.....	30.1
1851-60.....	35.6	1881-90.....	24.9

This decline can only be explained in one of three ways : First, a falling off in the number of immigrants as compared with population ; secondly, a diminution of natural increase ; thirdly, an outflow of population to Europe or elsewhere. If we compare the ratio of foreigners to population we find that so far from any falling-off or outflow of returning emigrants, the foreign population in 1890 stood as 15 per cent. of the total, having never before reached so high a proportion. We turn then to the question of natural increase, that is, the rise in the American-born population from one census to the next, the result of which is briefly as follows.

Period.	American born Population.		
	Annual increase.	Mean pop.	Rate of increase.
1831-40.....	370,000	15,000,000	24.6
1841-50.....	473,000	20,100,000	23.5
1851-60.....	636,000	27,300,000	23.3
1861-70.....	569,000	35,000,000	16.3
1871-80.....	1,049,000	44,400,000	23.6
1881-90.....	989,000	56,400,000	17.5

Here we find that, excepting the decade 1861-70, in which occurred the war for the Union, the annual rate of increase of American-born population was almost uniform, say, $23\frac{1}{2}$ per thousand, and that in the final decade, 1881-90, it fell to $17\frac{1}{2}$. It is not easy to ascertain the cause for this decline, there being no statistics of births and deaths for the Union. That there has been a decline is beyond all doubt, for if we compare the ages of the population at each succeeding census, we find a steady fall in the ratio of children, as the following table shows :

PERSONS UNDER 15 YEARS IN 1,000 OF POPULATION.

1840.....	437	1870.....	387
1850.....	416	1880.....	381
1860.....	399	1890.....	368

This declining ratio has been coincident with an extraordinary increase of urban population (cities and towns over 8,000 souls) since 1840, as follows :

	Urban pop.	Rural.	Total.	Urban percentage.
1840.....	1,940,000	15,120,000	17,060,000	11.4
1850.....	3,330,000	19,870,000	23,190,000	14.3
1860.....	5,072,000	26,371,000	31,443,000	16.1
1870.....	7,640,000	30,920,000	38,560,000	19.8
1880.....	11,319,000	38,837,000	50,156,000	22.6
1890.....	18,265,000	44,357,000	62,622,000	29.2

The reasonable inference from the above tables is that the overcrowding of population in cities is unfavorable to children. The evidence, however, is not conclusive, since European nations have had in like manner a rapid growth of urban population, and their rate of increase is, nevertheless, ascending. Moreover, notwithstanding the above decline, we find that the ratio of children in the United States is higher than in European countries, viz.:

PERSONS UNDER 15 YEARS, PER 1,000 INHABITANTS.

France.....	266	Ireland.....	325	England.....	352
Switzerland.....	318	Belgium.....	335	Germany.....	355
Italy.....	323	Austria.....	338	Norway.....	361
Sweden.....	323	Scotland.....	349	United States.....	368

The superiority of the United States in the ratio of children is one of those characteristics of the American race that defy explanation. It does not by any means imply that the birth rate is higher than in the countries of the Old World, seeing that Norway has the highest ratio of children in Europe, although her birth-rate is lower than those of England, Germany, Austria, Italy, Holland, or Denmark. Possibly the span of life in the United States is much shorter than in Europe, and if this be so the proportion of persons under fifteen years of age will, of course, be much greater than if the climate were disposed to longevity.

Comparatively few people in the United States pass the age of 60, as will appear if we take the ratio of those who had reached that age in the census of 1890 among the population over 20 years old, and compare the same with other countries.

PERSONS OF 60 OR MORE YEARS IN 1,000 OVER 20 YEARS.

United States.....	107	Prussia	139
Austria.....	126	Italy.....	140
England.....	134	Belgium.....	166
Sweden.....	137	Ireland.....	196

The number of persons over 20 who may expect to reach 60 years is much less in the United States than in Europe. It would be interesting to know whether the birth-rate and death-rate are higher than in Great Britain or certain other countries. In his valuable and thoughtful report on the census of 1880 Dr. Billings estimates the normal birth-rate at 34, death-rate 18, increase 16 per thousand. He discriminates between urban and rural death-rate as follows:

	Population.	Deaths.	Death-rate.
Urban.....	11,320,000	252,000	22.3
Rural.....	58,857,000	651,000	16.8
Total.....	50,157,000	903,000	18.0

There is no reason to question his accuracy as to death-rate, but he appears to put the birth-rate too low, at 34, since the surplus of births over deaths in the last decade was 17.5 per thousand. Hence we must suppose the American birth-rate to be 35.5, which compares with the rates of some European countries, thus—

	Per 1,000 inhabitants yearly.		
	Births.	Deaths.	Increase.
United States.....	35.5	18.0	17.5
Prussia.....	37.4	24.4	13.0
Italy.....	37.8	27.2	10.6

As regards the population of the United States it is surprising that the colored race is declining, although much more prolific than the whites. Dr. Billings states that 1,000 white women between 15 and 49 years of age will give birth yearly to 127 children and 1,000 colored women to 164 children; but so high is infant mortality among negroes that their rate of increase is much slower than among whites, the colored population having now fallen below 12 per cent. of the total, as compared with 16 per cent. in 1850.

And here it may be apropos to make a forecast of the population

of the United States for the census years 1900 and 1910 compared with 1880 and 1890, viz.:

	1880.	1890.	1900.	1910.
White Americans.....	36,829,000	45,902,000	56,020,000	68,400,000
Colored population.....	6,647,000	7,470,000	8,360,000	9,400,000
Foreigners.....	6,680,000	9,250,000	10,730,000	12,200,000
Total.....	50,156,000	62,622,000	75,100,000	90,000,000

The area of the United States, excluding Alaska, is just 3,000,000 square miles; the average density of the New England States is 71 inhabitants to the square mile, so that it may be said that the Union could easily support 210,000,000 souls, or three times its present population.

Meantime other vast fields are opening to invite immigrants. Canada, Brazil, Spanish America, and Australia are each of them larger than the United States. Each of them could find room for 200,000,000 settlers, which shows that there is no motive to fear that the world will be overcrowded for many centuries to come.

MICHAEL G. MULHALL.